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E I du Pont de Nemours and Company  
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4417 Lancaster Pike  
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EXAMINER
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1795

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**MEMBRANES FOR FUEL CELLS*****Response to Arguments***

First, with respect to the recitation "... an ion exchange ratio (IXR) of at least about 17 ..." (see too applicant's remarks on p. 6) , the Banerjee et al. reference teaches an IXR of at least about 23 (see Banerjee, 2:62-3:5; claim 1), as discussed in the Final Office Action issued on January 6, 2009. Since it has been held that obviousness exists where the claimed ranges overlap or lie inside ranges disclosed by the prior art (e.g., *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990)), it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a solid fluorinated polymer electrolyte membrane having an IXR of *at least* about 17 into the direct oxide fuel cell of Banerjee as recited in this claim (emphasis added). See MPEP 2144.05 (I).

As to Applicant's arguments drawn to comparison of the membranes C and E as discussed in the Banerjee et al. reference (see p. 5 of its remarks), it should be noted that "[t]he use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain." *In re Heck*, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983). A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including non-preferred embodiments. *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989); *Upsher-Smith Labs. v. Pamlab, LLC*, 412 F.3d 1319, 1323, 75 USPQ2d 1213, 1215 (Fed. Cir. 2005) (reference disclosing optional inclusion of a particular component teaches compositions that both do and do not contain that component). See MPEP 2123 (I). Further, the relative permeability of membrane E of Banerjee as compared to that of its membrane C depicted in Table 3 shows that the methanol permeability (cross-over) of membrane E is 47% less than that of membrane C (emphasis added). Banerjee expressly teaches that "significant reduction [in methanol cross-over] is

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obtained for laminates having a thin, high-IXR component”, such as it membrane E (see Banerjee, 10:50-63, Table 3).

As to applicant’s argument that the membrane E of Banerjee was not operated at the temperature of 20 to 40 °C as presented in the amended claim 18 (see p. 5 and 6 of its remarks), the courts have held that either anticipation or obviousness exists where applicant claims a composition in terms of a function, property or characteristic, and the composition of the prior art is the same as that of the claim but the function, property or characteristic is not explicitly disclosed by the reference. *In re Best*, 562 F.2d 1252, 1255 n.4, 195 USPQ 430, 433 n.4 (CCPA 1977)). See MPEP 2112 (III).